

Weekly Report

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Projects

Deep Learning for Visualization

This week I mainly focused on generating scatterplot datasets and learning Caffe (a deep learning framework commonly used in SeSaMe).

- **Datasets** The dataset list is based on [1] which contains about 700 datasets from the R language library. Currently I am working on transforming the datasets into scatterplots. Additionally I was looking for the datasets in the UCI Machine Learning Repository and downloading them.
- **Method** After discussion with Yongkang and Wang Wei, they recommended that at first I can use the deep auto-encoder to transform the images into feature vectors and perform clustering on it to have a try. I deployed a Caffe framework on my computer and tried to run some demo programs.

Besides, I emailed the authors of [1] in order to get their organized scatterplot datasets however there was no response till now.

Plan for the Next Week

- Generate the scatterplots.
- Use deep auto-encoders to get some preliminary results.

References

- [1] A. V. Pandey, J. Krause, C. Felix, J. Boy, and E. Bertini, "Towards Understanding Human Similarity Perception in the Analysis of Large Sets of Scatter Plots," *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, pp. 3659–3669, 2016.